SAFEGUARDING YOUR FOOD AND DRUG SUPPLY -- NO. 45

A radio talk by W. W. Vincent, chief of the western district, Food and Drug Administration, U. S. Department of Agriculture, broadcast June 18, 1931, at 12:45 p.m., through KGO, San Francisco, and associated National Broadcasting Company stations.

MR. LAMB: Folks, W. W. Vincent, Chief of the Western District of the Federal Food and Drug Administration is with us again today. I've just finished asking him a question or two on your behalf. To the question as to his subject, Mr. Vincent answered he would like to talk about "water." And, without batting an eye, he went on to say that "water was something more than a medium on which to float ships and in which to wash clothes." Water is considered a food by the Food and Drug Administration. Mr. Vincent, are you planning to give us a dissertation on water in general, or tell us about a few of the kinds of water such as rain water, ordinary drinking water, or mineral water?

MR. VINCENT: Well, I thought I should speak of mineral water. It is nearing that time of year, however, when perhaps I should also mention our ordinary drinking water.

MR. LAMB: The Federal Food and Drug Administration does not test ordinary drinking water, does it? My impression was that you were interested only in that which might be shipped interstate.

MR. VINCENT: Yes, that's correct. However, we are interested in the other, too, and from several standpoints. We all have to drink water, you know, and sometimes these ordinary waters are bottled and shipped in interstate commerce. My thought with reference to fresh water is this - pretty soon a lot of us are going to think about some distant trout stream or other suitable camping place. We can't always be sure of the drinking water that we may secure when we go away from home. A number of people have asked me how they could protect themselves and be assured of water that would produce no harmful effect. Well, the only way to be assured is to have the water tested, but since that is sometimes impracticable, I can give them a method which, if applied to water suspected of pollution, will render it safe. Iodine will do it - the iodine you have in your medicine cabinet. It is the tincture. Ordinary tincture of iodine contains approximately 7% of iodine. If you are not certain of the water you are drinking, here's the dosage of iodine to add in order to make it safe for drinking purposes. To one quart of water add one drop of the tincture of iodine. After thirty minutes, water so treated will usually be safe. For the ordinary pailful, or 2-3/4 gallons, add 11 drops. If you have a barrel - the ordinary barrel is of 52-gallon capacity - one tablespoonful or three teaspoonsful of tincture of iodine will assure reasonable safety. There is another method of disinfecting water. This is by means of tablets containing a chlorine compound. You can purchase such tablets in many drug stores and the directions will be found upon the package.

MR. LAMB: Well, that's good to know. Throughout this Western country, with its large tourist population, with campers everywhere, undoubtedly there must be some illness resulting from drinking water that is unsafe or polluted.

MR. VINCENT: Yes, that's true. Intestinal disorders frequently result from drinking polluted water. And the worst part is that sparkling clear water may be polluted, whereas water with a bad odor may carry such an odor due to causes other than pollution.

MR. LAMB: Well, me for a little iodine on the next camping trip. Coming back to mineral water, Mr. Vincent, how about lithia water? It was once a popular beverage for certain disorders, I understand. I don't recall having seen any of it on the market for some time.

MR. VINCENT: Well, lithia waters have largely disappeared from the market, at least under that name. Lithia water had quite a vogue. One of the first cases I made after entering the Department resulted in a seizure of so-called lithia water. It was misbranded. It didn't contain much lithia. In addition, that particular water was polluted. Its pollution was both animal and vegetable in character. The charge made against the product was that it consisted in part of a filthy and decomposed animal and vegetable substance. Not only did the Department seize that water, and thus eliminate it from the channels of commerce, but later prosecuted the manufacturer. On the label of that product were statements which falsely and fraudulently represented the material as a cure for gout and rheumatism. The Federal Notices of Judgment relate many actions instituted by your food authorities against mineral waters, many of which, in addition to being polluted, made curative claims for various diseases.

Following the lithia vogue, numerous claims for radio activity and of therapeutic efficacy due to radium content of waters, appeared. Now, about these waters for which claims of radio activity have been made - I want to point out just one thing. The largest quantity of radio activity of a permanent nature found by your Food and Drug Administration in any bottled water of natural origin is 0.270 millimicrogram of radium per liter of water. That's a tiny quantity. Now, according to the Council of Pharmacy and Chemistry of the American Medical Association, the minimum daily dosage of radio activity per day is set at 2000 millimicrograms of radium. Therefore, in order to get a minimum daily dosage of radio-activity from that water of natural origin which showed the largest amount, it would be necessary for you to consume 1957 gallons. Folks, very few, if any, domestic bottled waters on the market at the present time bear unwarranted references to their radio activity. When they do appear, prompt action under the Food and Drugs Act quickly serves to bring about a proper label revision. Statements with regard to excessive radio-activity have not alone been confined to our domestic waters. Numerous actions have likewise been taken against imported waters. Did you know, Mr. Lamb, that mineral waters could be classified, that is, that their character is determined by the dissolved constituents?

MR. LAMB: Well, I haven't given very much thought to it. The thing that always impressed me about mineral waters was the effort of the manufacturer to exploit them for some particular disease or illness.

MR. VINCENT: Yes, that is characteristic; but their therapeutic value is limited, and where you see therapeutic claims held forth for any particular water, just remember you have reason to believe only such limited statements as actually appear upon the bottle label. You may as well forget the advertising material used by certain water distributors, especially that which does not accompany the package. Let's classify bottled waters.

First, there are those lightly mineralized table waters which contain no dissolved ingredients of any therapeutic significance.

Second, those in which limestone or dolomitic limestone predominates. The limestone is held in solution by carbon dioxide. These are known as antacid waters.

Third, there is the vichy type, in which sodium bicarbonate predominates, known also as antacid water. Generally these are referred to as of the soda type.

Fourth, waters in which common salt, sodium chloride, predominates. We term them saline in character.

Fifth, those in which epsom or glauber salts, one or both, predominate. They are the laxative waters and are also of saline character.

Sixth, the chalybeate, or iron type. Dissolved salts of iron characterize them.

Seventh, the sulphur waters. Some form of dissolved sulphur represents the characteristic ingredient.

Now, some waters are artificially carbonated and you will find the label indicates such artificial carbonation. Again, certain manufacturers add salts either to natural or mineral waters and where such salts are added, the labels will indicate the fact. Mineral waters may be true or artificial. If a true mineral water, the dissolved mineral constituents have resulted from contact with the earth through which the water has seeped or percolated. If an artificial mineral water, the mineral constituents have been added by man. There are a number of these latter upon the market. You will generally find them labeled under "_____brand Water" with qualifying statements indicating that various salts have been added.

I should tell you that the mineral constituents of the natural mineral waters vary considerably. Food and Drug Administration chemists have found as little as 25 parts per million of dissolved mineral matter in some commercial mineral waters, while as much as 20,000 parts per million have been found in others. This brings up the interpretation of chemical analysis which you sometimes see reported upon water labels or in advertising literature exploiting them. These are confusing to the layman and sometimes to other chemists. All chemists do not report analysis in the same form. Some report the mineral constituents in parts per million, some in grains per U. S. gallon and some in grains per Imperial gallon. If you remember that one grain per U. S. gallon is equivalent to a little over 17 parts per million, and one grain per Imperial gallon slightly exceeds 14 parts per million, it will serve to give you an idea of the relative amount of dissolved constituents. If you remember that certain purgative mineral waters contain as high as 4000 grains per gallon, or 68,000 parts per million of sodium sulphate (glauber salts), or magnesium sulphate (epsom salts), or both in combination, you will readily observe -- by referring to the analysis given for many waters - that they are but very slightly mineralized. I won't attempt a discussion or interpretation of typical chemical water analyses.

I would like to assume that if you are buying these waters and if they declare a sodium-chloride content, a sodium-bicarbonate or magnesium-carbonate, or an iron content, or a calcium content, that you know what your particular system may be in need of. Perhaps your physician might help you, in the event you have been guessing.

Remember, now, bottled mineral waters have a proper place in commerce. Some people, for certain reason, always prefer the same kind of drinking water and, when traveling, are able to secure exactly the product they want. Others, living in communities where the water is hard, may prefer a softer water and this is available in bottled waters. Again, some may prefer a carbonated water, and this is likewise available in bottled form. Where laxative, diuretic or antacid effects may be desired, there are certain waters available to you. I would not imply that such mineral waters are the only source of such essential mineral constituents as might be desired at the particular time. However, bottled waters containing such necessary minerals are available, and in convenient form for consumption.

I have said about all that can be said for bottled waters, notwithstanding the rather sensational claims or promises of benefit that reach you from certain water distributors.

Just a word in closing. As for mineral waters bottled at some famous springs to which people journey to take treatments which involve drinking the water, baths, rest, certain medical and hospital treatment, etc. - you cannot expect that drinking that water alone will produce the same beneficial results in your home that you might receive from a sojourn at the springs where you would get the other treatments I have mentioned.

Folks, my time is up. If you want this information on mineral waters, drop a postcard to W. W. Vincent, care the station to which you are listening, or to the U. S. Food and Drug Laboratory, San Francisco. That brings you all my "Read the Label" information free.

Next week some more about dried fruits.